



POWER CONTROL ENGINEERS

CONNECTING TO THE GRID

The process of getting your site connected to the utility.

POWER CONTROL ENGINEERS SPECIALISE IN LARGE DISTRIBUTION NETWORKS AND AS A RESULT A MAJOR PART OF OUR BUSINESS IS ASSISTING OUR CLIENTS WITH CONNECTION TO THE POWER UTILITY. WE HAVE FOUND MANY CLIENTS DO NOT FULLY APPRECIATE THE CHALLENGES AND PROCESSES INVOLVED IN SECURING A CONNECTION. THIS ARTICLE OUTLINES SOME VALUABLE INFORMATION TO CONSIDER.

Many clients have commented on the difficulties faced in dealing with the utility; however the utility is in a unique position whereby they also have obligations to monitor installation safety and procedures. It is therefore important that you ensure suitable installation safety and procedures are executed on your site that comply with relevant Australian standards and regulations prior to energisation.

As well as compliance the utility must be confident that any equipment or electrical disturbances including switching, load changes and faults that occur on a private network do not adversely affect their network. You may be required to demonstrate that equipment or issues on your site will not affect the electricity network and or damage infrastructure on your neighbour's site.

I have spoken to many site operators who are confident that inside their sites perimeter fence is none of the utilities business but this is actually the contrary. (PCE has more information available on this)

One of the challenges that many of our clients generally struggle with is timing. For small connections you can expect 6-12 months, for high voltage customers you can expect 12 to 24 months and for major connections (e.g. a large industrial site with a large load) 24-36 months. In fact, the NSW Service and Installation Rules state that you should contact the utility prior to committing any funds to a capital project.

The connection process can be quite daunting therefore I have summarised the main steps below;

1. APPLICATION FOR CONNECTION

This in itself can be difficult as specific information is required that often takes time, effort and knowledge of the system to produce.

2. NEGOTIATION

The utility should be negotiated with to ensure that the concept solution is the best for both parties. This stage can be the most difficult as it involves several different parties. This period continues throughout the design period and right up until construction starts.

3. DESIGN

The design of the utility owned network is completed by Level 3 Accredited Service Provider (ASP). ASP Level 3 companies have gone through a process and are authorised to complete design works on what will become utility owned assets. Due to legislative requirements such as environmental assessments and council notifications the Level 3 design process can take time. It must be noted that the design on the utility owned network is separate to the design of the customer owned network, however both have to be completed and approved by the utility prior to construction. PCE has extensive ASP Level 3 and private network design experience.

4. CONSTRUCTION

Construction is completed by Level 1 and or 2 Accredited Service Provider (ASP). These companies have gone through an accreditation process and are authorised to complete construction works on what will become utility owned assets.

5. PRE ENERGISATION

The next challenge is collating all of the information that the utility requires and submitting it in a structured manner prior to energisation. Over time we have found that many projects have been held up due to confusion about what should be included. This is where I believe an electrical engineering company such as PCE can really offer value. This often requires a fair amount of electrical engineering and having knowledge of what the utility will require and the skills to complete the works is, in my opinion absolutely pivotal.

6. ENERGISATION

This step can also take substantial amount of time and requires a lot of organisation and co-ordination between the utility and the installer. There are specific rules around notification of power outages and other factors involved.

This article is by no means an exhaustive procedure but a brief overview of the main process and challenges faced by several of our clients.

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